

Serial No. 10/646,238, filed 8/22/04

**IN THE CLAIMS:**

Please amend the claims as follows:

1. (Cancelled)

2. (Currently Amended) ~~The auxiliary gearbox of claim 1~~ An auxiliary gearbox of a transmission comprising:

a piston housing having a first bore and a second bore;

a first piston arranged within said first bore separating first and second chambers within said first bore, a first shaft extending from said first piston and connected to a first shift fork for selectively engaging a first auxiliary gear in response to actuation of said first piston;

a second piston arranged within said second bore separating third and fourth chambers within said second bore, a second shaft extending from said second piston and connected to a second shift fork for selectively engaging a second auxiliary gear in response to actuation of said second piston; and

first, second, and third actuators for selectively actuating said first and second pistons, said first actuator fluidly connected to said first chamber, said second actuator fluidly connected to said second and fourth chambers, and said third actuator fluidly connected to said third chamber, wherein a desired gear set is obtained by actuating two of said first, second and third actuators, wherein said first, second and third actuators are solenoids supported on said piston housing.

3. (Currently Amended)) The auxiliary gearbox of claim 2, wherein said solenoids selectively provide pressurized fluid to said first, second and third chambers.

4. (Cancelled)

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5. (Currently Amended) An auxiliary gearbox of a transmission comprising:  
a piston housing having a first bore and a second bore;

a first piston arranged within said first bore separating first and second chambers within said first bore, a first shaft extending from said first piston and connected to a first shift fork for selectively engaging a first auxiliary gear in response to actuation of said first piston;

a second piston arranged within said second bore separating third and fourth chambers within said second bore, a second shaft extending from said second piston and connected to a second shift fork for selectively engaging a second auxiliary gear in response to actuation of said second piston; and

first, second, and third actuators for selectively actuating said first and second pistons, said first actuator fluidly connected to said first chamber, said second actuator fluidly connected to said second and fourth chambers, and said third actuator fluidly connected to said third chamber, and each of said first, second, and third actuators including on and off states, a first gear set defined by said first and third actuator in said off state and said second actuator in said on state, a second gear set defined by said first actuator in said off state and said second and third actuators in said on state, and a third gear set defined by said first and third actuators in said on state and said second actuator in said off state.

6. (Currently Amended) An auxiliary gearbox of a transmission comprising:  
a piston housing having a first bore and a second bore;

a first piston arranged within said first bore separating first and second chambers within said first bore, a first shaft extending from said first piston and connected to a first shift fork for selectively engaging a first auxiliary gear in response to actuation of said first piston;

a second piston arranged within said second bore separating third and fourth chambers within said second bore, a second shaft extending from said second piston and connected to a second shift fork for selectively engaging a second auxiliary gear in response to actuation of said second piston;

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first, second, and third actuators for selectively actuating said first and second pistons, said first actuator fluidly connected to said first chamber, said second actuator fluidly connected to said second and fourth chambers, and said third actuator fluidly connected to said third chamber, and each of said first, second, third, and fourth chambers include pressurized and unpressurized states, a first gear set defined by said second and fourth chambers in pressurized states and said first and third chamber in unpressurized states, a second gear set defined by said first chamber in said unpressurized state and said first, second, and fourth chambers in said pressurized states, and a third gear set defined by said first and third chambers in said pressurized states and said second and fourth chambers in said unpressurized states.

7. (Currently Amended) An auxiliary gearbox of a transmission comprising:  
a piston housing having a first bore and a second bore;

a first piston arranged within said first bore separating first and second chambers within said first bore, a first shaft extending from said first piston and connected to a first shift fork for selectively engaging a first auxiliary gear in response to actuation of said first piston;

a second piston arranged within said second bore separating third and fourth chambers within said second bore, a second shaft extending from said second piston and connected to a second shift fork for selectively engaging a second auxiliary gear in response to actuation of said second piston; and

first, second, and third actuators for selectively actuating said first and second pistons, said first actuator fluidly connected to said first chamber, said second actuator fluidly connected to said second and fourth chambers, and said third actuator fluidly connected to said third chamber, wherein a desired gear set is obtained by pressurizing three of said first, second, third, and fourth chambers.

8.-11. (Cancelled)